

**I<sup>2</sup> INTERFACE INC**

# The under \$1000 10-megabyte Winchester disk drive for the IBM PC



#### **The highest margins for dealers come from Interface**

Interface continues to lead the way in providing dealers with low cost drives—Winchesters, floppies, and half-heights. Your one-stop source for disk storage for IBM/Compaq, Apple, Tandy and other popular personal computers.

#### **The under \$1000 Winchester**

Our 10-megabyte DiskSystem® for the IBM PC 2.0 DOS comes complete with an industry-standard 5-1/4" Winchester disk drive, cabinet, power supply, cable, controller, I/O adapter and device driver. And its suggested retail price is \$1495—giving dealers a healthy 50% markup. We also have 15 and 25 megabyte models with suggested retail prices of \$1795 and \$2245. All with the same high margin for you.

#### **Backed with proven service**

Hundreds of dealers across the country have recognized that Interface provides them with full support and service. We have our own in-house service and repair center. We provide dealers with personalized technical support. With nearly 10,000 DiskSystems shipped, Interface is the leader in providing dealers with the full range of disk drives.

For more information on our low cost DiskSystems, call Interface today.

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**I<sup>2</sup> INTERFACE INC**

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IBM is a registered trademark of IBM Corporation.  
DiskSystems is a copyright of Interface Inc.

7630 Alabama Avenue  
Canoga Park, CA 91304  
(213) 341-7914 • Telex: 662949

Prices are suggested retail and subject to change without notice  
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# 5 1/4" Winchester DiskSystem<sup>®</sup> for IBM PC-2.0

- 10, 15 and 25 megabyte models available now!
- Complete subsystem includes disk drive, cabinet, power supply, cable, connector, and I/O adapter for 2.0 DOS
- Exclusive double shock isolation system
- Underwriters Laboratories approval on cabinet and power supply
- IBM PC compatibility tested before shipment
- Standard warranty including 90 days parts and labor

INTERFACE's 5 1/4" Winchester disk drive

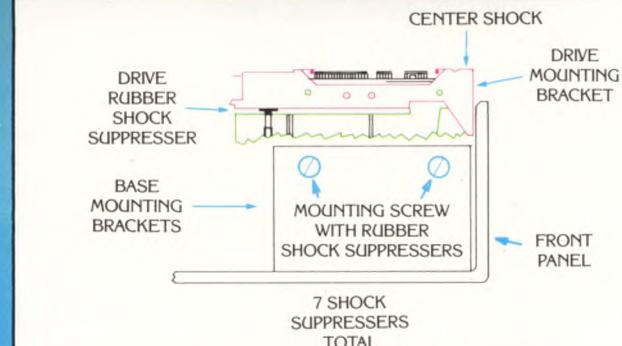
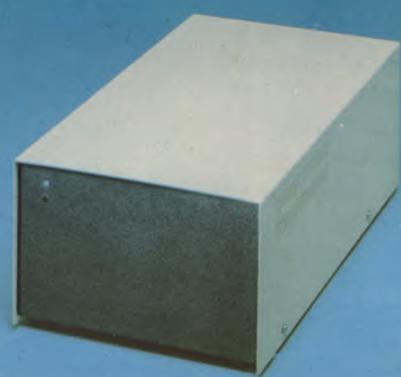


IBM PC in standard configuration with Winchester in background

## Move up to high capacity storage on the IBM PC

Now, you can have large-scale storage on the IBM PC. INTERFACE's I<sup>2</sup>BM 5 1/4" Winchester disk drives give you a choice of formatted storage capacities ranging from 10.6 megabytes up to 25.1 megabytes. Suddenly, your IBM PC can perform like an IBM XT. Best of all, INTERFACE gives you low-cost Winchester drives.

I<sup>2</sup>BM-10P 10.6 megabytes formatted storage \$1695.00



Double shock mounting for vibration isolation

I<sup>2</sup>BM-15P 15.6 megabytes formatted storage \$2295.00

I<sup>2</sup>BM-25P 25.1 megabytes formatted storage \$2995.00

## IBM PC compatible floppy disk drives

INTERFACE also offers a complete range of 5 1/4" floppy disk drives that are IBM PC compatible. In addition, INTERFACE has 3 1/2" floppy disk drives for other popular personal computers. Contact INTERFACE for additional information.

**Dealer Inquiries Invited**

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# INTERFACE

## 5 1/4" Winchester Disk Drive Specifications

CAPACITY	I <sup>2</sup> BM-10P	I <sup>2</sup> BM-15P	I <sup>2</sup> BM-25P
IBM formatted capacity:	10.6 MB	15.9 MB	25.1 MB
<b>DISK DRIVE</b>			
Number of platters:	2	3	3
Number of data surfaces:	4	6	5
Cylinders:	306	578	367
Tracks per inch:	345		
Average latency:		8.3 milliseconds	
Track-to-track access time:		2 milliseconds	
Head settling time:	15 milliseconds		5 milliseconds
Average access time:	85 milliseconds		54 milliseconds
MTBF:	10,000 power-on hours		
<b>CONTROLLER</b>			
Microprocessor based architecture			
Full sector buffer (512 bytes)			
Error correction—32 bits			
Interleave—Automatic			
<b>POWER/CABINET SUPPLY</b>			
Power—175 watts			
Voltage*—110–120 Volts AC 60Hz, or 220 Volts AC 50Hz, or 240 Volts AC 50Hz			
Safety approvals—Underwriters Laboratories			
<b>SYSTEM</b>			
Operating Temperature—4°C to 50°C (39°F to 122°F)			
Relative humidity—10–95%			
Maximum wet bulb temperature—85° noncondensing			
Altitude—Sea level to 7500 Feet			
<b>SOFTWARE</b>			
IBM DOS 2.0 (not supplied)			

\*Must be specified at time of order

Specifications subject to change without notice.

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# Low Cost DiskSystems<sup>®</sup> for IBM PC XT

- 5 1/4" Winchester disk drive subsystems with up to 50 megabytes of additional formatted storage for the PC XT ■ Subsystems include disk drive, cabinet, power supply, cable, and connector ■ Dual half-height floppy disk subsystems with up to 720K bytes of formatted storage ■ Operates under unmodified 2.0 DOS ■ Exclusive double shock isolation system on Winchester disk drives
  - Underwriters Laboratories approval on cabinet and power supply
  - Standard warranty including 90 days parts and labor



## Move up to higher capacity backup and storage on the IBM PC XT and PC

INTERFACE's I<sup>2</sup>BM 5 1/4" Winchester DiskSystems give you a choice of additional formatted storage or XT backup with capacities ranging from 10.6 megabytes to 25.1 megabytes. With INTERFACE's DiskSystems, your IBM PC XT will perform like a minicomputer. Best of all, INTERFACE DiskSystems are low cost.

I <sup>2</sup> BM-10X 10.6 megabytes formatted storage .....	\$1285
I <sup>2</sup> BM-15X 15.9 megabytes formatted storage .....	\$1595
I <sup>2</sup> BM-25X 25.1 megabytes formatted storage .....	\$2295

(Prices are suggested retail)

## Half-height floppy DiskSystems

INTERFACE also has for the IBM PC XT a dual half-height floppy system that delivers 720K bytes of floppy storage. The half-height system is designed to be mounted internally on the IBM PC XT. It directly replaces the "A" drive.

I<sup>2</sup>BM-2X Two half-height floppy disks with 360K bytes each .. \$535

Prices are suggested retail and are subject to change without notice.  
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# INTERFACE 5 1/4" DiskSystem Specifications

CAPACITY	I <sup>2</sup> BM-10X	I <sup>2</sup> BM-15X	I <sup>2</sup> BM-25X
IBM formatted capacity:	10.6 MB	15.9 MB	25.1 MB
<b>DISK DRIVE</b>			
Number of platters:	2	3	3
Number of data surfaces:	4	6	5
Cylinders:	306	578	578
Tracks per inch:	345	367	367
Average latency:	8.3 milliseconds		
Track-to-track access time:	2 milliseconds		
Head settling time:	15 milliseconds	5 milliseconds	5 milliseconds
Average access time:	85 milliseconds	54 milliseconds	54 milliseconds
MTBF:	10,000 power-on hours		
<b>CONTROLLER</b>			
Capability included as required by application.			
<b>POWER/CABINET SUPPLY</b>			
Power:	175 watts		
Voltage*:	110–120 Volts AC 60 Hz, or 220 Volts AC 50 Hz, or 240 Volts AC 50 Hz		
Safety Approvals:	Underwriters Laboratories		
<b>SYSTEM</b>			
Operating temperature:	4°C to 50°C (39°F to 122°F)		
Relative humidity:	10–95%		
Maximum wet bulb temperature:	85° noncondensing		
Altitude:	Sea level to 7500 Feet		
<b>SOFTWARE</b>			
Operates under unmodified 2.0 DOS			

## I<sup>2</sup>BM-2X SPECIFICATIONS

Formatted recording capacity: 720K bytes  
 Tracks per diskette: 80  
 Tracks per inch: 48 TPI  
 Disk Rotational Speed: 300 RPM  $\pm$  1.5 Percent  
 Track-to-track access time: 6 milliseconds  
 Head settling time: 15 milliseconds  
 Head load time: NONE  
 Average access time including head settling  
     time: 171 milliseconds  
 Motor start time: one second maximum

Average rotational latency: 100 milliseconds  
 MTBF: 8,000 power-on hours  
 Average component life: 5 years  
 Preventative maintenance: None required  
 Media life (reference only):  $4 \times 10^6$  passes per track  
 Error rates:  
     Soft read: 1 in  $10^9$  bits  
     Hard read: 1 in  $10^{12}$  bits  
     Seek error: 1 in  $10^6$  seeks

\*Must be specified at time of order

Specifications subject to change without notice.

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# Major Savings on Tandon Disk Drives for the IBM PC

- Up to 2.6 megabytes formatted storage with floppy disks
- Up to 50 megabytes Winchester disk drive storage
- 2.0 DOS compatible
- IBM compatibility tested before shipment
- Floppy disks can be mounted internally or externally
- Simple plug-in installation with no additional wiring or electronics required
- Standard warranty includes 90 days parts and labor

IBM PC with two Tandon drives installed internally

5 1/4" Winchester disk drive for IBM PC

Dual internal half height drives



Standard sized 5 1/4" floppy disk  
drive for external mounting

## Internal and External

### 5 1/4" Floppy Drives

Tandon disk drives for mounting internally or externally. For internal mounting, basic drive is provided which is a simple plug-in installation with IBM DOS compatibility. For external mounting, complete subsystem is provided including disk drive, cabinet, power supply and cable.

TM100-1 Single-sided, double density drive with 160K bytes IBM format

TM100-2 Double-sided, double density drive with 360K bytes IBM format

### HalfHi Drives

These half-height 5 1/4" floppy drives mount internally. A dual drive configuration is available.

Double-sided, double density drive with 360K IBM format

### 5 1/4" Winchester Disk Subsystems

Ten to 25 megabytes of IBM formatted storage. Completely self-contained design with unique double shock suspension. Includes Winchester disk drive, cabinet, power supply, cable, controller, and I/O adapter. Operates with 2.0 DOS.

I <sup>2</sup> BM-10P	10 megabytes
I <sup>2</sup> BM-15P	15 megabytes
I <sup>2</sup> BM-25P	25 megabytes
	Winchester disk drive

Dealer Inquiries Invited—  
We have it all for you

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# IBM PC COMPATIBLE DISK DRIVES SPECIFICATIONS

CAPACITY	TM100-1	TM100-2	HalfHi
Formatted recording capacity for IBM PC: (All are double density recording)	180K	360K	360K
Tracks per diskette:	40	80	80
Tracks per inch:	48	48	48
Disk rotational speed:	300 RPM ± 1.5 percent		
ACCESS TIME			
Track-to-track access time: (milliseconds)	5	5	5
Head settling time:	15 milliseconds		
Head loading time:	NONE		
Average access time, (milliseconds) including head settling time:	75	75	75
Motor start time:	250 milliseconds max.		
Data transfer rate:	250,000 bits per second		
Average rotational latency:	100 milliseconds		
RELIABILITY			
MTBF:	8000 Power-on Hours, typical usage, 25% duty cycle		
Preventative Maintenance:	NONE		
MTTR:	30 minutes		
Passes per track:	$4 \times 10^6$		
Error rate:			
Soft read:	1 in $10^9$ bits		
Hard read:	1 in $10^{12}$ bits		
Seek errors:	1 in $10^6$ seeks		
ELECTRICAL REQUIREMENTS			
+ 5 Volts D.C. Power:	+ 5 volts + 0.25 volts at 600 milliamperes average with 50 millivolts peak-to-peak ripple		
+ 12 Volts D.C. Power:	+ 12 volts ± 0.6 volts at 900 milliamperes average with 100 millivolts peak-to-peak ripple		

Specifications subject to change without notice

5 1/4" Winchester disk drive specifications are available upon request from Interface, Inc.

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# Apple II Compatible Disk Drives

- Low cost Apple-compatible floppy disk drives with half-tracking
- Straddle erase head
- Easy to install. Simple Plug-in. No additional wiring required.
- Standard sized 5 1/4" floppy disk drives
- Standard sized 5 1/4" ThinLine half-height floppy disk drives
- Dual ThinLine half-height 5 1/4" floppy disk drives
- Disk storage same as Apple disk drives
- Standard warranty includes 90 days parts and labor



A) Apple II with standard sized INTERFACE 5 1/4" floppy disk drive  
B) Apple II with standard sized INTERFACE 5 1/4" floppy disk drive and ThinLine half-height floppy disk drive  
C) Dual half-height 5 1/4" floppy disk drive configuration  
D) Single half-height 5 1/4" floppy disk drive configuration

**Price and Technology Breakthrough**  
Thousands of Apple II owners have increased their disk storage capacity for less cost than they ever imagined thanks to a new price breakthrough. INTERFACE delivers Apple II compatible disk drives, in either full size or half-height versions, at less cost than similar drives. All drives operate with the

Apple II disk interface and 3.3 DOS. A standard 20-conductor cable is provided to connect the INTERFACE drive with the Apple Disk II interface PCBA. An Apple Disk Controller is required. Drive subsystem includes 5 1/4" drive, cabinet and cable. System handles 3.3 DOS, PASCAL and CP/M programs.

Dealer Inquiries Invited

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Apple is a registered trademark of Apple Computer, Inc.  
ThinLine is a registered trademark of Tandon Corporation

# INTERFACE INC.

## APPLE COMPATIBLE DRIVES

### SPECIFICATIONS

CAPACITY	STANDARD 5 1/4"	THINLINE 5 1/4"
Formatted Recording Capacity (3.3 DOS):	143,360 bytes	163,840 bytes
<b>FUNCTIONAL SPECIFICATIONS</b>		
Track to Track Access Time:	20 ms	
Rotational Speed:	300 RPM ± 1.5%	
Number of Tracks:	35	40
<b>D.C. VOLTAGE REQUIREMENTS</b>		
+ 12V ± 5% (selected):	600 milliamps	650 milliamps
+ 5V ± 5%	200 milliamps	300 milliamps
<b>MECHANICAL DIMENSIONS</b>		
Width:	*	5.75"
Height:	3.25"	1.625"
Depth:	8.25"	7.69"
Weight:	3 Lbs	
<b>RELIABILITY SPECIFICATIONS</b>		
Mean Time Between Failure:	8,000 Power on Hours at 25% Duty Cycle	
Mean Time to Repair:	30 Minutes	
Preventative Maintenance:	None	
Media Life (Reference Only):	$3 \times 10^6$	$3 \times 10^6$
Error Rates:		
Soft Read:	1 in $10^9$ bits	
Hard Read:	1 in $10^{12}$ bits	
Seek Read:	1 in $10^6$ seeks	

\*Dimensions (exclusive of front panel)

\*Specifications subject to change without notice.

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I2 INTERFACE INC  
DEALER PRICE LIST

7630 Alabama Ave. Unit 6  
Canoga Park, CA 91304  
(213) 341-7914  
TLX #662949

January 1, 1984

The Following PRICE LIST dated January 1, 1984 is the  
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be copied without the written consent of INTERFACE INC.

ALL PRODUCTS ARE SUBJECT TO THE WARRANTY ATTACHED HERETO.

This price list is subject to change without notice.

WINCHESTER SUBSYSTEMS FOR I.B.M. PC AND COMPATIBLES

<u>PC's UNDER DOS 2.0</u>	<u>DEALER PRICES</u>			<u>RETAIL</u>
	QTY'S	1-5	6-12	13-UP
I2BM10P				
10 MEGABYTE DISKSYSTEM. . . . .	\$995	\$950	\$915	\$1495
I2BM15P				
15 MEGABYTE DISKSYSTEM. . . . .	\$1150	\$1095	\$1070	\$1795
I2BM25P				
25 MEGABYTE DISKSYSTEM. . . . .	\$1595	\$1545	\$1495	\$2245
I2BM33P				
33 MEGABYTE DISKSYSTEM. . . . .	\$1895	\$1845	\$1795	\$2795

BACKUP OR ADDITIONAL STORAGE FOR THE I2BMP DISKSYSTEM OR I.B.M. PC XI

I2BM10S OR I2BM10X			
10 MEGABYTES. . . . .	\$795	CALL FOR QUOTE	\$1195
I2BM15S OR I2BM15X			
15 MEGABYTES. . . . .	\$895	CALL FOR QUOTE	\$1295
I2BM25S OR I2BM25X			
25 MEGABYTES. . . . .	\$1295	CALL FOR QUOTE	\$1895
I2BM33S OR I2BM33X			
33 MEGABYTES. . . . .	\$1595	CALL FOR QUOTE	\$2295

PRICES INCLUDE EVERYTHING YOU NEED TO BECOME OPERATIONAL.

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FULL SIZE 5 1/4" FLOPPY DISK DRIVES

<u>TANDON</u>		<u>DEALER PRICES</u>				<u>RETAIL</u>
	QTYS	1-5	6-12	13-24	24-UP	
TM100-1						
48TPI SS/DD. . . . .	\$165	\$155	\$150	\$150	\$150	\$215
TM100-2						
48TPI DS/DD. . . . .	\$220	\$205	\$200	\$195	OR CALL	\$325
FM101-4						
76TPI DS/DD. . . . .	\$290	\$275	\$265	\$255		\$425

HALF HEIGHT 5 1/4" FLOPPY DRIVES

<u>TANDON</u>						
TM50-1						
48TPI SS/DD 20 MS. . . . .	\$145	\$130	N/A	N/A		\$185
TM50-2						
48TPI DS/DD 6 MS. . . . .	\$205	\$190	N/A	N/A		\$275
TM55-4						
96TPI DS/DD 3 MS. . . . .	\$270	\$250	N/A	N/A		\$355

<u>SHUGART</u>						
DSA455						
TWO SA455 MOUNTED TOGETHER.	\$375	\$375	\$370	\$365		\$550
SA455						
SINGLE SA455 48TPI DS/DD. . .	\$205	\$190	\$185	\$185		\$295

8" HALF HEIGHT FLOPPY DRIVES

TM848-1						
48TPI SS/DD. . . . .	\$325	\$310	\$300	\$290		\$475
TM848-2						
48TPI DS/DD. . . . .	\$400	\$375	\$365	\$355		\$575

APPLE COMPATIBLE DRIVES

	<u>DEALER PRICES</u>				
QTY	1-5	6-12	13-24	25-UP	RETAIL
I2AI 5 1/4" Apple Assy . .	\$185	\$150	\$145	\$140	\$245
I2ASHH Single 1/2 Height.	\$195	\$170	\$165	\$160	\$295
I2ADHH Dual 1/2 Heights. .	\$380	\$335	\$325	\$315	\$550

FLOPPY DISK CONTROLLERS

	<u>DEALER</u>	<u>RETAIL</u>
Maynard, I.B.M. Equivalent. . . . .	\$150	\$215
Apple Equivalent. . . . .	\$65	\$80

CABLES

	<u>DEALER</u>	<u>RETAIL</u>
Tandy single drive. . . . .	\$17	\$25
Tandy dual drive. . . . .	\$21	\$30
I.B.M. drive C . . . . .	\$19	\$30
I.B.M. drive C & D. . . . .	\$23	\$35

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I.B.M. is a Trademark of the I.B.M. Corp.

FREIGHT. . . . . F.O.B. FACTORY

WARRANTY. . . . . STANDARD WARRANTY APPLIES  
INCLUDES 90 DAY PARTS AND LABOR.  
EXTENDED WARRANTY AVAILABLE UPON  
PLACEMENT OF ORDER.

WARRANTY

Seller warrants products of its manufacture to be free from defect in workmanship and material under normal use and service for a period of 90 days after the date of shipment. Seller agrees to repair or replace at its repair center, without charge, all defective products which are returned for inspection to said center within the applicable warranty period; provided such inspection that the defects are as specified above, and provide further the equipment has not been altered or repaired other than with authorization from seller and its approved procedures, not been subject to misuse, improper maintenance, negligence or accident, damaged by excessive current or otherwise had its serial number or any part thereof altered, defaced or removed. All defective items replaced hereunder shall become the property of the seller. THIS WARRANTY IS IN LIEU OF, AND BUYER WAIVES, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THOSE OF MECHANICABILITY OR FITNESS FOR PURPOSE. The warranty set forth herein may not be modified except by written amendment executed by an officer of INTERFACE INC.